



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/568,344

02/14/2006

Markus Bold

286006US0PCT

2561

22850

7590

01/07/2010

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

KOSACK, JOSEPH R

ART UNIT

PAPER NUMBER

1626

NOTIFICATION DATE

DELIVERY MODE

01/07/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/568,344	Applicant(s) BOLD ET AL.	
	Examiner Joseph R. Kosack	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,20,26,27 and 31-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19,20,26,34-36,40 and 42 is/are rejected.
- 7) ☒ Claim(s) 27,31-33,37-39 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 19, 20, 26, 27, and 31-42 are pending in the instant application.

Amendments

The amendment filed on September 25, 2009 has been acknowledged and has been entered into the instant application file.

Previous Claim Objections

Claims 19-21 and 23-41 were previously objected to for containing elected and non-elected subject matter.

The Applicant has retraversed the lack of unity requirement, but has not provided any new arguments as to why the lack of unity requirement should be withdrawn. The Examiner maintains the current requirement.

Claims 27, 31-33, 37-39, and 41 still contain non-elected subject matter, and the objection is maintained for those claims. The objection is withdrawn for all other claims.

Claim Rejections - 35 USC § 102

Claims 27-32 were previously rejected under 35 U.S.C. 102(b) as being anticipated by Hitchcock et al. (*Journal of Organometallic Chemistry*, 1982, C26-C30).

The Applicant has deleted the anticipated subject matter, and the rejection is withdrawn.

Previous Claim Rejections - 35 USC § 103

Claims 19-21 and 23-41 were previously rejected under 35 U.S.C. 103(a) as being unpatentable over Hitchcock et al. in view of Thompson et al. (US PG PUB 2002/0034656).

The Applicant has traversed the rejection on the grounds that Hitchcock et al. does not suggest using the carbene complexes in OLEDs, that Hitchcock et al. is vague prior art, and that it would not be obvious to try.

The Examiner is not persuaded. The complex shown by Thompson et al. does have a carbene ligand via the direct attachment of the benzene ring to the iridium atom. Therefore, even though Hitchcock et al. does not articulate that their complexes can be used in OLEDs, the teaching by Thompson et al. would direct the person of ordinary skill in the art to try the compounds of Hitchcock et al. in OLEDs as both sets of iridium complexes have carbene ligands. Therefore, even though Hitchcock et al. may be vague prior art, the teachings of Thompson et al. fill in the gaps sufficiently and provide the guidance not provided in Hitchcock et al. The rejection is maintained, except for claims 27, 31-33, 37-39, and 41, which no longer contain unpatentable subject matter.

Claim Objections

Claims 27, 31-33, 37-39, and 41 are objected to for containing elected and non-elected subject matter. The elected subject matter has been identified above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

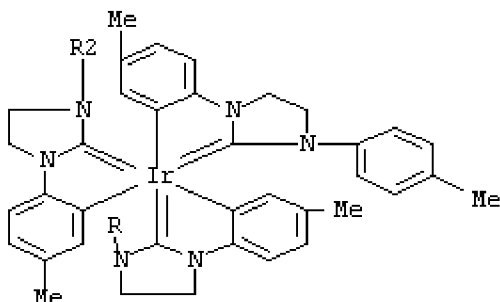
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 19, 20, 26, 34-36, 40, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hitchcock et al. in view of Thompson et al. (US PG PUB 2002/0034656).

Hitchcock et al. teaches a complex of the formula



, where R and R2 are tolyl. This reads on the

compounds of the claims where, for example with the structure of claim 27, M1 is Ir, m is 0, o is), Y3 is aryl, Y1 and Y2 form a two carbon atom bridge, R1 and R2 form a 4 carbon atom bridge, p is 0, and q is 0. See page C27, Figure 1. Hitchcock et al. also teaches the method of production. See Scheme 2, page C29.

Hitchcock et al. do not teach where the compound is used in an OLED or an OLED using device, nor where the compound is in a light-emitting layer.

Thompson et al. teach that the class of compounds, namely Ir(III) coordinated to three ligands where the connections are through two different cycles on each ligand, are light-emitting compounds and can be used as OLEDs. See page 3, paragraph 23. Therefore, the person of ordinary skill in the art would be motivated to try the iridium(III) complex of Hitchcock et al. with a reasonable expectation of success as a light-emitting compound for an OLED as many other compounds of similar structure have this utility. Additionally, one of ordinary skill in the OLED art would envision using the claimed OLED in devices such as lighting units, televisions, information signs, etc...

Hence, the claims are *prima facie* obvious over the prior art.

Conclusion

Claims 19, 20, 26, 34-36, 40, and 42 are rejected. Claims 27, 31-33, 37-39, and 41 are objected to.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph R. Kosack whose telephone number is (571)272-5575. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571)-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph R Kosack/
Examiner, Art Unit 1626